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Complex Coordinated Terrorist Attack: Considerations for Practical Emergency Preparedness and Resiliency Exercises

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Complex Coordinated Terrorist Attack:
Considerations for Practical Emergency Preparedness and Resiliency Exercises

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Abstract

In today's geopolitical environment, the emergence of religious extremism is becoming more prevalent. Justified as a holy war, jihadists are becoming more brash and calculated in attacking targets to inflict maximum damage and instill the greatest amount of fear. Coordinated, lethal, terrorist attacks against innocent targets; killing indiscriminately is a preferred tactic of extremists. Multiple attacks, coordinated either in proximity or timing, using firearms, explosive devices, or fire to inflict damage and disrupt life is the basis of a Complex Coordinated Terrorist Attack (CCTA).

City and regional emergency response plans should address mitigating efforts to a CCTA. Community strength and resiliency is dependent on a rapid, seamless, local, regional, and potentially federal response to a terrorist event. To aid in planning efforts, multiple federal agencies sponsor a collaborative effort among federal, state, local, and private sector entities aimed at assessing community vulnerabilities to terror attacks, existing emergency response plans, and consultation to develop regional mitigating actions in response to a CCTA.

In 2016, the Federal Emergency Management Agency (FEMA) offered designated grant money to communities interested in developing emergency preparedness and resiliency efforts against these types of terror attacks. Dayton Metropolitan Medical Response System (MMRS) and the Dayton Emergency Management Services (EMS) Council collectively agreed upon and submitted a grant proposal to help fund a collaborative, regional, multi-jurisdictional exercise in response to a potential CCTA event. Integral aspects of regional vulnerability assessment, exercise planning, and community resiliency are addressed in this manuscript.

Keywords: Multi-jurisdictional, Readiness, Disaster, Contingency, Mutual-Aid, Cooperative

Complex Coordinated Terrorist Attack: Considerations for Practical Emergency Preparedness and Resiliency Exercises

Throughout all regions of the world, people come together to live, intermingle, cooperate, and network. Although cultural differences exist in various regions, there are innate understandings that govern appropriate interaction and help establish the stability in any given community. Defined by *Merriam-Webster*, a community (1998) is “an interacting population of various kinds of individuals in a common location” or “a group of people with a common characteristic or interest living together within a larger society”. In the face of natural disaster, economic hardship, or other form of tragedy, these communities are bound by cultural norms that provide strength and support to one another. This “ability to recover from or adjust easily to misfortune or change” is *Merriam-Webster's* definition of resiliency (1998).

When daily routines are disrupted, there is an essential need for a standardized plan, standing set of skills, and mitigating efforts to maintain normalcy throughout the community. In established communities, especially throughout the western, industrialized nations, ongoing efforts exist to develop contingency plans in any catastrophic event. Current emergency preparedness plans incorporate emergency services (such as police department, fire department, and ambulance) and medical care through local hospitals but often do not extend beyond this level of coordination. Current emergency preparation anticipates needs resulting from fire, motor vehicle accidents, drug overdoses, and in extreme cases, initial response to natural disaster scenarios. However, the planning and coordination with this current set of standing skills does not adequately address potential needs secondary to an intentional, coordinated, malicious attack on the community.

In assessing threats in today's environment, the new reality is that terrorism is always on the table. It is the goal of most extremist groups to eradicate western government and law and replace it with the caliphate and Sharia law. Though this is the end goal of most extremist groups, the use of terrorist activities to disrupt western ways of life, inflict fear in unbelievers, and force their ideology on others is vast. Brian Michael Jenkins tells us that "Terrorist attacks are intended not only to cause fear and alarm but also to inspire terrorist constituencies and attract recruits" (Rabasa et al., 2009, p. 2¹). As terrorist organizations continue to spread their ideology throughout the world to those sympathetic to the extremist cause, the prevalence of complex coordinated terrorist attacks increase.

With this new reality in mind, the Department of Homeland Security (DHS) is providing \$35,940,000 in grant monies to selected cities, affording them the opportunity to enhance their preparedness network and to incorporate response and resilience against terrorist attacks (The CCTA Grant, 2016). The program was described as follows:

The Fiscal Year (FY) 2016 Program to Prepare Communities for Complex Coordinated Terrorist Attacks (CCTA Program) provides funding to local, state, tribal, and territorial jurisdictions to enhance preparedness and build capacity to prepare for, prevent, and respond to complex coordinated terrorist attacks in collaboration with the whole community (Department of Homeland Security, 2016, p. 1).

Grants up to \$2.5 million are to be distributed to communities based on need and documentation regarding how the funds will establish CCTA response and resiliency plans.

Statement of Purpose

The purpose of this manuscript was to explain the concept of CCTA, provide a contextual

¹ Attribution was taken from a blog (<https://www.rand.org/blog/2008/12/mumbais-terrifying-logic.html>) that was apparently used to create the citation.

history of how these events affect our reality, and discuss the important elements to remember when establishing a Joint Counterterrorism Awareness Workshop Series (JCTAWS) caliber exercise to prepare a region in the event of a terror attack.

CCTA Definition

A complex coordinated terrorist attack is specifically defined as “a coordinated assault on one or more locations in close succession, initiated after little or no warning, employing one or more of the following: firearms, explosives, and arson” (Joint Counterterrorism Awareness Workshop Series [JCTAWS], 2016, p. 1). Designed to inflict the maximum amount of damage and overwhelm emergency response systems, attacks are coordinated at multiple locations throughout an area. As mentioned previously, in the last several years these attacks are becoming more frequent, more coordinated, and designed for maximum lethality.

International CCTA

Mumbai. On 26 November 2008, ten armed gunmen initiated an extremely well planned and coordinated attack in Mumbai, India (Figure 1). Members of the Lashkar-e-Taiba (LeT) organization based in Pakistan, hijacked an Indian fishing vessel, murdered the crew, then decapitated the captain as the vessel neared the Indian coast (Schiffrin, 2009). The ten member team divided into three groups of two and a single group of four and spread out over the city to give the illusion of a much larger attacking force (Rabasa et al., 2009). The attacking force was hand picked by the LeT leadership during recruit training where its members received specialized instruction to specifically carry out this deadly attack. After landing, one of the two member teams took a taxi to Chhatrapati Shivaji Terminus, the main train station in Mumbai, where they opened fire indiscriminately on commuters. Over the next 90 minutes, this team arbitrarily killed ordinary Indian citizens until it was met by heavily armed police units and was

from the terminal (Rabasa et al., 2009). Leaving the train station, they hijacked a car and drove to the Cama and Albless Hospital where they continued their killing spree. Utilizing the method of hijacking cars as they fled, the pair, who was ultimately responsible for approximately one third of the fatalities, was eventually trapped and killed by Indian police forces (Rabasa et al., 2009). A second two-man team walked to a Jewish run commercial-residential complex and opened fire in the lobby. Using hand grenades and firearms, this team destroyed a gas station, took several hostages (five of whom they eventually killed), and was responsible for eight of the total deaths. This team laid siege in the complex, prepared to battle police forces, and was ultimately killed by Indian law enforcement (Rabasa et al., 2009). The third two man team laid siege in the Trident-Oberoi Hotel for seventeen hours, contacted media and demanded release of Muslim fighters from prison in exchange for their hostages. This team, responsible for 30 deaths, was ultimately killed by Indian police forces (Rabasa et al., 2009). The final team of four members moved toward the Taj Mahal Palace Hotel where they began killing indiscriminately, burning rooms, and laying siege to the hotel for 60 hours. This entire team was also killed by Indian commandos (Rabasa et al., 2009). By the end of the ordeal, 164 individuals were killed and 308 injured during the attack with nine of the ten terrorists killed during the fighting (Mumbai Facts, 2016).

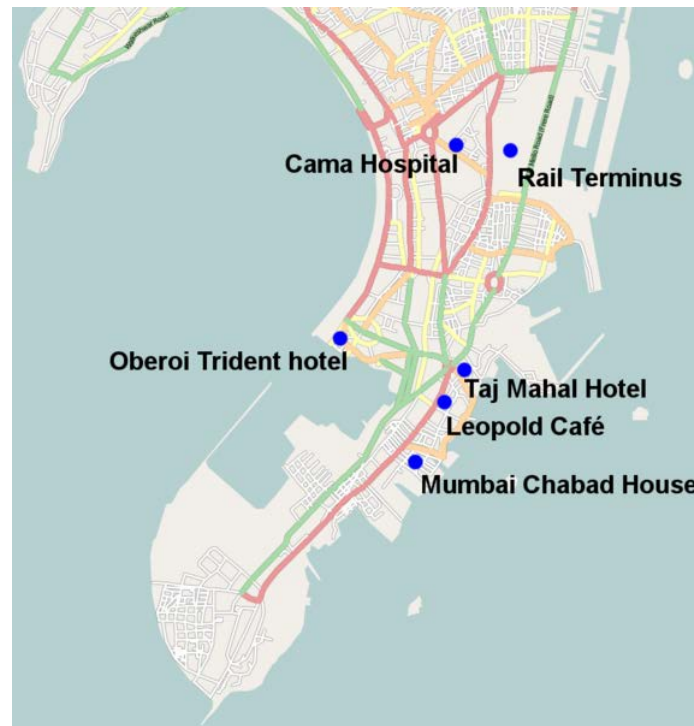


Figure 1. Sites of Mumbai 2008 complex coordinated terrorist attack (OpenStreetMap, 2008).

Paris. On 13 November 2015, multiple terrorist attackers, armed with attack rifles and suicide vests, initiated an attack on the civilian population of Paris, France. The attack was well planned and coordinated at several predetermined sites throughout the city (Figure 2). Three of the attackers detonated suicide bombs on the outskirts of Paris near Stade de France while a soccer match was in progress (Nossiter, Breeden, & Bennhold, 2015). Soon after the initial attack outside the stadium, several other attackers began a spree of mass shootings and a suicide bombing at cafés and restaurants throughout other parts of the city. Additionally, gunmen shot 89 patrons during a concert at the Bataclan theater and took others hostage (Hamaide, 2015). As police stormed the concert hall, the remaining gunmen were either killed by law enforcement or detonated suicide vests. Ultimately, 137 individuals were killed (130 victims and 7 attackers) with 368 others injured (99 critically) as a result of this attack (Marcus, 2015). Islamic State of

Iraq and the Levant (ISIL) claimed responsibility for the attack stating that it was in retaliation for French airstrikes on ISIL targets in both Syria and Iraq (Castillo, 2015; Elgot et al., 2015).

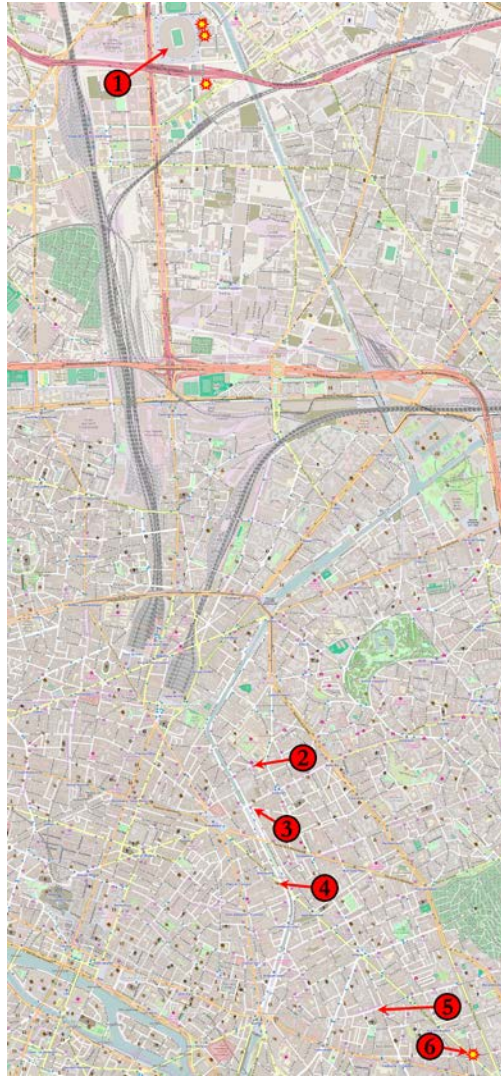


Figure 2. Sites of Paris 2015 complex coordinated terrorist attack (Veggies, 2014).

Brussels. On 22 March 2016, three coordinated suicide bombing attacks occurred in Brussels, Belgium. The first two bombing attacks occurred in the departure hall at the Brussels airport. Attacks were almost simultaneously launched from explosive devices concealed in luggage just outside the check-in counter before getting to the security checkpoints (Figure 3). Further investigation of the scene revealed another undetonated explosive device along with an

AK-47 rifle that was not used in the attack (Cussac, 2016). The third bombing occurred at the Maalbeek metro station in the center of the city (Lasoen, 2017). The combined attacks resulted in 35 fatalities (32 civilian and 3 attackers) and 250 injuries. Once again, responsibility for this attack was claimed by ISIL in response to Belgium's role in supporting international anti-Islamic State coalitions and fighting against extremists (Chad, Boyle, & Knoll, 2016).

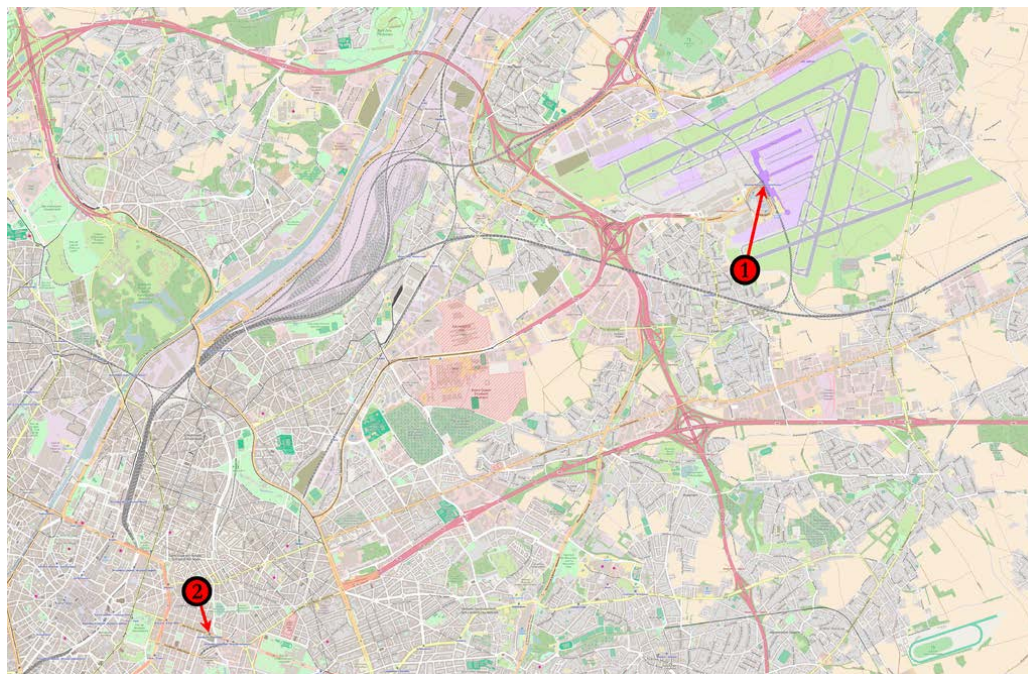


Figure 3. Sites of Brussels 2016 complex coordinated terrorist attack (Veggies, 2016).

Domestic CCTA

9/11. The most well-known and horrific complex coordinated terrorist attack on U.S. soil occurred on 11 September 2001. In this attack, hijacked commercial airliners were used as weapons against two of the most visible symbolic buildings in the United States. The World Trade Center in New York was a symbol of the economic and financial strength of the west. The Pentagon in Arlington, Virginia is a symbol of the military might of the United States.

In route from Boston to Los Angeles, five terrorists hijacked American Airlines flight 11 and redirected the plane off of the intended flight path to New York City. The plane was

intentionally crashed into the World Trade Center's North Tower at 8:46 a.m. (Fire Department City of New York, 2002) killing all 92 passengers on board. Within 17 minutes, a second attack on the World Trade Center occurred when United Flight 175, also originating in Boston was crashed into the south tower at 9:03 a.m. killing the 65 passengers on board. As a consequence of these two attacks, both the north and south towers of the World Trade Center crumbled to the ground resulting in massive destruction to the surrounding area together with the death of 2,749 individuals (Department of Justice, 2003).

At 9:37 a.m., American Airlines Flight 77 in route from Washington Dulles Airport to Los Angeles International Airport was hijacked and the plane intentionally crashed into the west side of the Pentagon. Headquarters to the United States Department of Defense approximately 23,000 military personnel, Department of Defense (DoD) civilian employees and contractors work in the Pentagon (Office of the Under Secretary of Defense, 2003). The airliner carrying 64 souls and thousands of gallons of jet fuel created a massive fire that ultimately collapsed three of the five rings in wedge four and five. The attack claimed the lives of 184 military and civilian victims (Department of Justice, 2003).

Boston. During the running of the Boston Marathon on 15 April 2013, another well-known CCTA was initiated on United States soil. Drawing information from the combined agency after action report (Massachusetts, 2014), the following details regarding the attack and timeline were obtained. Near the finish line of the Boston Marathon course, an improvised explosive device was detonated at 2:49 p.m. at 671 Boylston Street. Thirteen seconds later, a second improvised explosive was detonated 180 yards along the course at 755 Boylston Street. These improvised devices were hidden at ground level in backpacks placed among the spectators watching the marathon race. These coordinated explosions claimed the lives of three

individuals, caused injury to 264 spectators, and resulted in 16 of the survivors requiring traumatic amputations of various limbs. The ensuing manhunt for the perpetrators immediately commenced. With a unified, multiagency effort, video of the two attackers was discovered and the assailants were identified as two brothers. The ensuing manhunt ended in the brothers killing a MIT policeman, engaging in a firefight with police forces resulting in the death of one terrorist, and the younger brother being captured hours later. This particular attack was one of the first from self-radicalized, lone wolf type assaults in the United States.

San Bernardino. In San Bernardino, California on 2 December 2015, county employees were gathered at the Inland Regional Center for training. One of the employees, a county environmental health specialist left the meeting and returned later with his wife in dark colored, tactical military gear and opened fire on the employees. In a matter of minutes, the pair had discharged more than 100 rounds, killing 14 individuals and wounding 22 more (Braziel, Straub, Watson, & Hoops, 2016). Fleeing the scene in a rented vehicle, the couple proceeded to create other scenes where they engaged law enforcement during an officer involved shooting and at their residence where both assailants were killed (Braziel et al., 2016).

JCTAWS Methodology

To help facilitate regional preparedness against complex terror attacks, the National Counterterrorism Center (NCTC), Federal Bureau of Investigation (FBI), and Department of Homeland Security (DHS) sponsor a collaborative effort among federal, state, local, and private sector entities known as the Joint Counterterrorism Awareness Workshop Series (JCTAWS). When a community desires assistance in developing emergency response and resiliency to CCTA, a community can contract for a JCTAWS evaluation where federal employees will perform an onsite evaluation and personalize exercise scenarios based on observed

vulnerabilities. The program uses “a whole community approach that enables cities to identify gaps in capabilities, plans, training, and resources” then offers recommendations or assistance to help eliminate identified deficiencies (JCTAWS, 2016, p. 1). Published JCTAWS program objectives specifically include the items listed in Figure 4.

Review existing preparedness, response and interdiction plans, policies, and procedures related to a complex terrorist attack;
Identify gaps in plans, operational capabilities, response resources, and authorities;
Identify federal, state, and local resources—including federal grants, training, exercises, and technical assistance—available to address potential gaps in capabilities;
Improve whole community situational awareness, recognize best practices, and encourage information sharing among all stakeholders in the event of a complex terrorist attack;
Examine healthcare system and clinical challenges unique to a complex terrorist attack employing small arms and explosives;
Examine the roles of the community and bystanders in a complex terrorist attack;
Discuss frameworks and existing protocols for immediate medical management of wounded in, or near, an attack site; and
Identify and share best practices and lessons learned from case studies in medical preparedness and response.

Figure 4. JCTAWS program objectives. Copied verbatim from JCTAWS, 2016, p. 2.

Not every community has adequate funding or other resources to hire the National Counterterrorism Center to come assess weaknesses, establish exercise scenarios, and incorporate the multifaceted aspects of community resilience into practice. In addition, if ever confronted with a terrorist attack, “the ability to end such attacks quickly and limit casualties depends on the rapid response of law enforcement, firefighters, emergency medical services, and public health professionals; equipment; training; existing and validated community response plans; and effective communication” (JCTAWS, 2016, p. 3). Not all communities are able to hire NCTC staff to visit their local region and perform readiness assessments against CCTAs. Instead of hiring a team to perform the JCTAWS evaluation, local communities will often base the planning and execution of exercise scenarios on JCTAWS guidance and stated objectives.

In the fall of 2016, the Dayton MMRS and EMS councils collaborated to develop a system of ongoing self-evaluation, identification of deficiencies and vulnerabilities in preparation and resiliency efforts, and coordination of multiple community agencies against CCTAs. Detailed in the next section are several important elements to consider when establishing a JCTAWS caliber exercise to prepare a region in the event of a terror attack.

Essential Exercise Elements and Considerations

Planning. The first step in developing an exercise is planning. There must be a collaborative effort with the city emergency managers, police department leads, in addition to the leadership in federal, state, local, and private sector partnerships (JCTAWS, 2016). During this initial encounter, key stakeholders collectively discuss a tabletop exercise scenario and discuss how each individual agency would respond to the situation. This activity is carried out in a safe environment and the information is meticulously recorded and is evaluated in greater detail later in the planning process. At the end of this exercise, the multidisciplinary team will have a detailed itemization of how each agency responded to a theoretical attack and each agency's role in threat mitigation. During separate sessions, the initial response is carefully analyzed, to identify deficiencies or gaps in the initial plan. The purpose of this first meeting is to identify integral vulnerabilities within the various organizations in the event of an attack. Communities often base emergency response actions off of a pre-established plan in place for another situation. For example, the designated disaster plan for a tornado or flooding is already in place and serves as the foundation for all response efforts in the region. Breakout sessions with specific focus such as "senior command, operational response, community coordination, and medical response" help "to further examine the response actions and identify gaps in planning and capabilities" (JCTAWS, 2016, p. 4). As a team, these deficiencies are identified and agreed

upon as vulnerabilities in the face of a complex attack. Specialized training may be helpful in planning mitigating efforts to vulnerabilities prior to a full-scale exercise. For example, many regions have discussed active shooter scenarios and have developed response plans to this situation. However, CCTA may incorporate improvised explosive devices (IED) or homemade explosives (HME). Dedicated training regarding medical response to blast injuries or law enforcement operational response to bomb threat may be necessary prior to engaging in full scale, multidisciplinary or multijurisdictional exercises.

Scenario planning is challenging, needs to be tailored to specific regional needs or susceptibilities, and have cross-organizational involvement. With access to identified vulnerabilities discussed in the tabletop exercise, working knowledge of the different organizations involved in the activity, and expertise in established emergency response tactics, scenario planning needs to test beyond the initial reaction to an attack. Individual planning should incorporate second, third, or even fourth order effects of the initial response to an attack. The purpose of a scenario is to challenge the organization to consider ramifications of initial stabilizing actions, motivate individuals to analyze decisions, and to think beyond the basic response. It is important for a scenario to be as realistic as possible and to expect a viable plan of action in the given situation. For example, in a mass casualty response, an individual should be able to discuss the specifics of care plans beyond, “The next step is to transport to the hospital.” It is important to consider how many EMS vehicles are available, whether or not the triage and initial first aid care realistic (first responders will have a limited equipment and supply on hand), or if will there be enough manpower on hand to adequately care for and move victims.

Command and control. Command and control is an integral component of any city’s response to an emergent incident. Historically, complex terror attacks that involve multiple

locations cross jurisdictional lines. The likelihood of the entirety of any future CCTA incident remaining within a single jurisdiction is remote. Attempts to establish multiple command centers can complicate and hinder a timely response. Therefore:

Multi-agency plans should clearly identify roles and responsibilities in order to reduce confusion and improve coordination [with] established agreed-upon locations for the immediate standup of a Unified Command Center (UCC) and Area Command to quickly facilitate situational awareness and the management of resource requests coming from multiple incident sites (JCTAWS, 2016, p. 8).

In close coordination with location of a UCC is agreement upon a centralized command structure. Often the fire department will assume incident command of any given emergency. However with cross-jurisdictional involvement with all operations being directed from a unified center, the development of a designated leadership structure is essential.

In the first hour of an attack, prior to the activation of a UCC, the dispatch center is the entity with the most complete operational picture, and is best positioned to allocate assets to multiple crisis sites (JCTAWS, 2016). Obviously, dispatch centers in a region suffering a CCTA would be strained to absorb and manage the projected volume increase for emergency needs following a coordinated attack. Initial management plans “should address the quick recall of personnel and the use of communication tools that enable the dispatch center to track and communicate needs to emergency operation centers. Dispatch plans may include ways to re-direct or de-prioritize non-emergency calls” (JCTAWS, 2016).

Communication. The ability to communicate is vital to successful emergency operations. Commonly, radio communications (equipment and protocols) vary between jurisdictions. Historically, when federal, state, regional, and local entities have worked together,

differences between established radio communications have proved challenging. For example, given different radio equipment and frequency use, local response and federal teams are unlikely to be able to speak directly to the UCC. One solution to this critical problem is to provide key leaders with radios preprogrammed to channels used in central command. Identifying key leadership personnel who are likely to participate in emergency response should be considered if the number of designated radios is limited. Most communication in today's environment is dependent on the cellular network. However, in the event of a CCTA, it must be anticipated that either the cellular nodes could be neutralized or at the very least, the cellular system will become overburdened by worried individuals trying to contact friends and loved ones. Formalized communication plans "should account for as many as six locations and address dedicated channels to talk to dispatch centers [and] the Area Command should have sufficient channels to provide a dedicated channel for each Incident Command Post" (JCTAWS, 2016, p. 13). Formalized plans should expect that cellular networks might potentially fail and have contingency communication options available.

In addition to communication between leadership and response team members, messaging to the public is essential. A formalized public messaging plan is necessary to keep the public informed of unfolding events during a complex attack and to provide communications regarding required actions. During an emergency, leadership needs a coordinated message to deliver current, pertinent, and accurate information to the public.

Formalized agreements. During the exercise process is the time to formally develop and then implement cross-jurisdictional memoranda of understanding, mutual aid agreements, and official interaction methods with military base command and leadership. Cities with a large military presence have the additional responsibility to plan and coordinate emergency and

contingency plans with the base commander and garrison support staff. These relationships should be published in a planning guide rather than having an informal arrangement that relies on personal connections which may be transitory (JCTAWS, 2016). After formalizing the cross-jurisdictional relationships and rules of engagement, these associations should be exercised routinely to develop seamless interoperable communication and coordination. As regions develop and cultivate supportive relationships, detailed response plans, and effective communication methods between the various organizations, there are numerous ‘lessons learned’ in the process that need to be shared. ‘Community’ extends beyond the local region. It is important to reach out to other cities, share best practices, and discuss lessons learned.

Long-term resiliency. As with any emergency, plans should go beyond the initial response and consider a path for long-term resiliency. Following the neutralization of a complex coordinated attack; the scars of an assault will extend past the initial event and remain in a community for months to years. Mitigating efforts throughout a community must be in place to help the region heal from the emotional and psychological effects. The first step to resilience and a return to a sense of normalcy following a complex coordinated terrorist attack is acknowledging the second, third, and fourth order effects to the public and population health. Although these specific issues are not directly addressed during a contingency exercise, their consideration is important and necessary to the planning process.

Conclusion

The future is unwritten, but communities can assess the current geopolitical climate and develop emergency plans for any contingency. Extremist ideology does not follow common avenues of reasoning and terrorism, the most common method of manipulation by extremist groups, is designed to negatively impact our way of life. Although uncertainty exists, regional, multi-jurisdictional, collaborative plans can help alleviate the impact of a terror attack. Fortunately, lessons from previous events are available and guidance is accessible to help communities avoid common pitfalls in development of emergency preparedness and resiliency plans. Through the JCTAWS guidance and considerations discussed in this manuscript, multiple federal agencies have provided a framework for regional leadership to use in developing their own, customized, CCTA emergency response and resiliency plans.

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Appendix A: List of Competencies Met in CE

Wright State Program Public Health Competencies

Assess and utilize quantitative and qualitative data.
Apply analytical reasoning and methods in data analysis to describe the health of a community.
Describe how policies, systems, and environment affect the health of populations.
Communicate public health information to lay and/or professional audiences with linguistic and cultural sensitivity.
Engage with community members and stakeholders using individual, team, and organizational opportunities.
Make evidence-informed decisions in public health practice.
Evaluate and interpret evidence, including strengths, limitations, and practical implications.
Demonstrate ethical standards in research, data collection and management, data analysis, and communication.
Explain public health as part of a larger inter-related system of organizations that influence the health of populations at local, national, and global levels.

Concentration Specific Competencies

Emergency Preparedness
Demonstrate the understanding of model leadership in emergency conditions
Demonstrate the mastery of the use of principles of crisis and risk management
Use research and/or evaluation science methodologies and instruments to collect, analyze and interpret quantitative and qualitative data
Employ ethical principles in the practice of public health emergency preparedness